

CLAIMS

1. A method for ringing and inter-symbol interference reduction in an optical communications system comprising:

5 providing an asymmetric pulse having a rise time greater than a fall time.

2. The method of claim 1 wherein said rise time is substantially longer than said fall time.

10 3. The method of claim 2 wherein said rise time is at least 50% longer than said fall time.

4. The method of claim 2 wherein said rise time is at least twice the length of said fall time.

15 5. The method of claim 1 wherein said rise time is at least 30% of the pulse width.

6. The method of claim 1 further comprising:
20 increasing a pulse width of said pulse by delaying the beginning of the falling edge of said pulse.

7. The method of claim 1 wherein said pulse is sent to a direct modulated laser diode.

25 8. The method of claim 1 wherein said pulse is part of a high speed optical transmission.

9. An optical transmission system comprising:

a signal obtainer configured to obtain an input signal; and

a rise time increasing unit configured to increase a rise time for a pulse in said input

5 signal wherein said rise time is greater than a fall time of said pulse.

10. The optical transmission system of claim 9 further comprising:

a pulse width increasing unit configured to increase a width of said pulse by delaying
the beginning of the falling edge of said pulse.

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11. The optical transmission system of claim 9 wherein said pulse is sent to a
direct modulated laser diode.

12. The optical transmission system of claim 9 wherein said pulse is part of a high
15 speed optical transmission.

13. The optical transmission system of claim 9 wherein said rise time for said
pulse is substantially longer than a fall time of said pulse.

20 14. The optical transmission system of claim 13 wherein said rise time is at least
fifty percent longer than said fall time.

15. The optical transmission system of claim 13 wherein said rise time is at least
twice the length of said fall time.

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16. The optical transmission system of claim 13 wherein said rise time is at least
thirty percent of a bit period.

17. A computer program product comprising:

a computer usable medium having computer readable program code embodied therein configured to reduce ringing and inter-symbol interference, said computer program product
5 comprising:

computer readable code configured to cause a computer to obtain an input signal; and

computer readable code configured to cause a computer to increase a rise time for a pulse in said input signal wherein said rise time is greater than a fall time of said pulse.

10 18. The computer program product of claim 17 further comprising:

computer readable code configured to cause a computer to increase a width of said pulse by delaying the beginning of the falling edge of said pulse.

19. The computer program product of claim 17 wherein said pulse is sent to a

15 direct modulated laser diode.

20. The computer program product of claim 17 wherein said pulse is part of a high

speed optical transmission.

20 21. The computer program product of claim 17 wherein said rise time for said

pulse is substantially longer than said fall time of said pulse.

22. The computer program product of claim 21 wherein said rise time is at least

fifty percent longer than said fall time.

25 23. The computer program product of claim 21 wherein said rise time is at least

twice the length of said fall time.